

- 15. The imaging system according to claim 1 wherein the radiation converter comprises:
  - a scintillator that converts the radiation shadow into the image-bearing 'visible light; and
  - optical transmission means in optical communication with the scintillator for transmitting the image-bearing visible light to the photosensitive medium.
- 16. The medical imaging system according to claim 15 wherein the scintillator has a density of at least 6 grams per cubic centimeter.
- 17. The medical imaging system according to claim 15 wherein the scintillator is fabricated of cadmium tungsten oxide or lutetium oxyorthosilicate.
- 18. The medical imaging system according to claim 12 wherein the radiation source is selectively movable to project the radiation between a plurality of positions such that the radiation shadow changes for each of the plurality of positions.
- 19. The medical imaging system according to claim 18 wherein the radiation source electronically shifts between two positions generating stereo-pairs of three-dimensional images.
- 20. The medical imaging system according to claim 18 wherein the radiation source is continuously deflected producing a plurality of radiation shadows that can be interactively "focused" to various levels within the tissue.
- 21. The medical imaging system according to claim 18 further comprising processing means for differentiating between foreground and background in the plurality of radiation shadows such that the background can be subtracted from the image.
- 22. The medical imaging system according to claim 21 wherein the processing means is adapted to replaced the background with a second background.
- 23. The medical imaging system according to claim 18 wherein the radiation source projects divergent rays of the radiation.

- 24. The medical imaging system according to claim 12 wherein color images are created by filtering the image-bearing radiation consecutively through a plurality of filters thus creating a plurality of sub-images, the imaging system further comprising processing means for correcting motion in the color images by removing blur and correlating the sub-images.
- 25. The medical imaging system according to claim 12 wherein the radiation source projects white light and the detector is disposed opposed to the radiation source with the tissue interposed therebetween.
- The medical imaging system according to claim 12 wherein the radiation source projects white light which is reflected from the tissue, the medical imaging system further comprising fiber optic means for collecting the white light reflected from the tissue and communicating the white light to the detector.
- 27. A method of correcting for motion in an image generated by capturing two or more consecutive sub-images, the method comprising the steps of:
  - calculating amplitudes of low harmonics of a first image of the two or more consecutive sub-images;
  - mapping a coordinate transformation of first image into a second image of the two or more consecutive sub-images;
  - computing corresponding transformations of the two or more consecutive sub-images by interpolation; and
  - reconstructing the image from the two or more consecutive sub-images.
- 28. The method according to claim 26 further comprising the step of establishing a pixel-to-pixel correspondence by computing interpolated pixel values.
- 29. A detector for use in an electronic imaging system comprising an active area divided into a plurality of rows and columns where each of the plurality of rows is adapted to be independently shifted up or down.
- 30. The detector according to claim 29 wherein the detector incorporates Multi-Pinned Phase (MPP) technology to reduce dark current.

- The detector according to claim 29 wherein the detector is chemically etched in an isotropic etching solution in a rotating disc system.
- The detector according to claim 29 further comprising field means for 32. generating a stable electric field proximal to a back-side surface of the detector.
- The detector according to claim 29 wherein the field means is 33. dynamically selectable to adjust demagnification of the detector so as to govern a area of an abject to be imaged
- The detector according to claim 29 wherein the detector has a stable 34. "dead layer" created by ion implantation.
- A method for fabricating a radiation converter having a high resolution, the method comprising:
  - attaching a scintillator to a light guide; and

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- machining a surface of the scintillator to a predetermined thickness.
- The method according to claim 35 wherein the scintillator has a high 36. density.
- 37. The method according to claim 36 wherein the scintillator has a density of at least about 8 grams/cm<sup>3</sup>.
- 38. The method according to claim 35 wherein the scintillator is machined to the predetermined thickness of approximately 50 microns thickness.
- 39. The method according to claim 35 wherein the scintillator is fabricated of cadmium tungsten oxide.
- 40. The method according to claim 35 wherein the scintillator is fabricated of lutetium oxyorthosilicate.
- 41. The method according to claim 35 wherein the light guide is fiber optic.
- 42. The method according to claim 35 wherein the light guide has a top surface to which the scintillator is attached and the top surface is substantially planar.